

CLAIMS

What is claimed:

- 1 1. An apparatus comprising:
 - 2 a rod comprised of a non-metal, said rod adapted to reinforce a hollow
 - 3 tube.
- 1 2. The apparatus of claim 1 wherein said material is selected from the
2 group consisting of: polyamides, PEEK, PPS, PEI, PI, liquid crystalline polymers,
3 glass reinforced polymers, graphite reinforced polymers, and any combination
4 thereof.
- 1 3. The apparatus of claim 1 wherein said rod has a proximal section and
2 a distal section and said proximal section has a larger diameter than said distal
3 section.
- 1 4. The apparatus of claim 3 wherein said distal section is more flexible
2 than said proximal section.
- 1 5. The apparatus of claim 1, said rod having a proximal section and a
2 distal section wherein said proximal section is annealed to induce a higher
3 crystallinity such that said proximal section is stiffer than said distal section.

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1 6. A catheter comprising:
2 an outer member;
3 a hollow inner member extending through said outer member;
4 an outer lumen between said inner and outer members; and,
5 a rod comprising a non-metal, said rod extending through said outer
6 lumen.

1 7. The apparatus of claim 6 wherein said material is selected from the
2 group consisting of: polyamides, PEEK, PPS, PEI, PI, liquid crystalline polymers,
3 reinforced polymers, glass reinforced polymers, graphite reinforced polymers,
4 and any combination thereof.

1 8. The catheter of claim 6 wherein said rod has a proximal section and a
2 distal section and said proximal section has a larger diameter than said distal
3 section.

1 9. The catheter of claim 8 wherein said distal section is more flexible than
2 said proximal section.

1 10. The catheter of claim 6, said rod having a proximal section and a distal
2 section, wherein said proximal section is annealed to induce a higher crystallinity
3 such that said proximal section is stiffer than said distal section.